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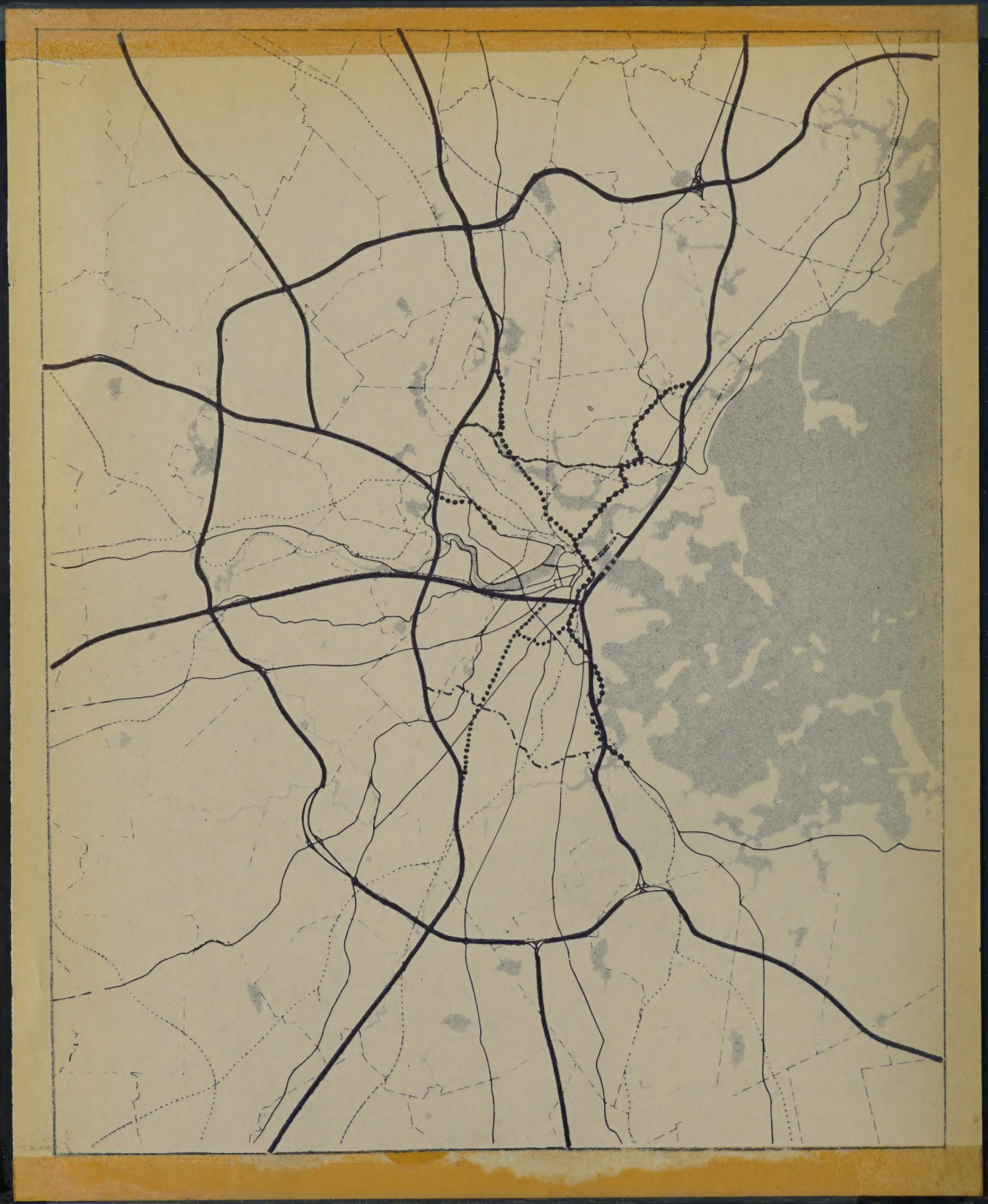

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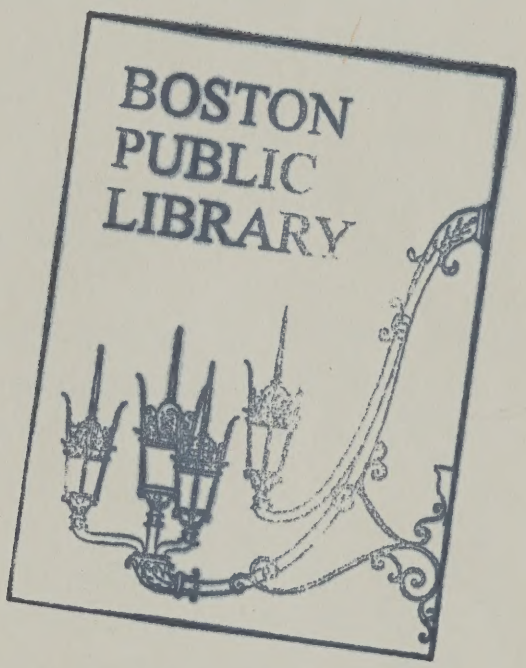
Report on the

ALTERNATE MASTER HIGHWAY PLAN

for the

Boston Metropolitan Area



Boston Redevelopment Authority
Transportation Planning Department
William R. McGrath, Transportation Co-ordinator

February, 1966

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II. Alternate Master Highway Plan (1" = 4000')

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Introduction

On September 27, 1965, Mr. William R. McGrath, P.E., Transportation Co-ordinator of the Boston Redevelopment Authority said in a letter to Mayor Collins of Boston the following:

"We are transmitting to you the enclosed "Report on Alternate Highway Master Plan for the Boston Metropolitan Area". We believe it will be of interest to you. It suggests the long accepted Radial-Inner Belt highway pattern for the Boston area may not be the best or, if built, may require major supplementary work at a later date. It has not been possible to do enough study to prove that our alternate can positively supplant the Inner Belt, but there is no doubt that the Inner Belt itself will not be sufficient."

"While the press is still reporting strong protests against the alignment of the Inner Belt, we believe every town considers the construction of the road to be inevitable. The public agitation appears to have the effect of a rear guard action or, at the most, of a bargaining maneuver."

"Approval of the Inner Belt is a hard decision for everyone involved. It may be justified on the argument that a choice has to be made between the construction of this road now, or no new road in Boston at all for a number of years to come. Our division of the BRA is not opposed to the approval, but feels a professional obligation to make sure that the decision, whatever way it should go, is made after full consideration of the Inner Belt's deficiencies and of the alternate solutions which offer themselves including their difficulties, as far as timing and financing is concerned."

This memo and the attached maps depict in essence the Alternate Master Highway Plan that was transmitted to the Mayor. This alternate is not just a variation, but a completely different alternative to the currently planned Radial-Inner Belt system; both should be evaluated using the same methods and standards. By obtaining a clear picture of the shortcomings which the now planned system will have, the means for its eventual improvement will emerge.

I. The Master Highway Plan

A network of freeways is emerging in the Boston Metropolitan region. With the (1) Whitten Thoroughfare Plan for Metropolitan Boston of 1930 as a starting point, the (2) Master Highway Plan of 1948 was developed. That plan has been the program statement for all freeway projects since. Later endeavors have amended the Plan in detail, but the concept of the basic network has never varied.

Among recent studies, the most important are (3) "Report on Traffic Studies by Coverdale and Colpitts (1957) and (4) "Inner Belt and Expressway System, 1962", by Hayden and Maguire and Associates (1962). These studies have contributed detailed proposals of road alignments and forecasts of traffic volumes, and have introduced modifications related to the building of the Massachusetts Trunpike Extension.

The network designed in 1948 consisted of the "Belt Expressway" corresponding to what is now called "Inner Belt", five major radials, and three minor radials which were not necessarily conceived as freeways. In the latest comprehensive system of 1962 this scheme has evolved into the Inner Belt, five major radial freeways, a minor radial plus a radial toll road. Furthermore, Route #128, which in 1948 was of minor importance and remained outside the scope of the study, played a key role in the system of 1962 as a major circumferential, while Highways #3 and #24 increased the number of major radial freeways outside of Route #128 to seven.

Progress in the construction of freeways has been slower in the Boston region than was anticipated. The history of delay seems to reflect serious doubts, harbored by the public and its leaders as to whether the proposed freeways are worth the price in social discomfort and funds which their construction requires, and whether they are the best solution to the regions transportation problems.

II. Unsolved Problems

The report by Coverdale and Colpitts as well as the "Inner Belt Report" by Hayden-Maguire analyzes the capacity of the proposed system in comparison with the

anticipated demand and arrives at rather dismal conclusions. According to the "Inner Belt Report" (p. III-49) no section of the Inner Belt will be able to accommodate all the cars which would wish to use it, as seen in the tabulation below:

	FROM	TO	NO. OF LANES	CAPACITY AS % OF FREE ASSIGN-MENT DESIRE-1975
Central Artery	N.E. Expressway	Tunnel	6	28%
Central Artery	Tunnel	S.E. Expressway	6	30%
Inner Belt	S.E. Expressway	S.W. Expressway	8	61%
Inner Belt	S.W. Expressway	Turnpike	8	65%
Inner Belt	Turnpike	N.W. Expressway	8	87%
Inner Belt	N.W. Expressway	N. Expressway	8	74%
Inner Belt	N. Expressway	N.E. Expressway	8	53%

Going back to Coverdale and Colpitts the picture appears worse. Comparing the capacity of the Inner Belt between the Southeast and Southwest Expressways with the demand in 1975 shown on the diagram facing page 93 of the report, the capacity amounts to only 25% of the demand, instead of 61%; and for the most congested segment of the Central Artery (diagram facing p. 63) to less than 18% instead of 30%.

Coverdale and Colpitts discuss the situation at length on pages 118 to 124 of their report and recommend that an "Inner Expressway" be incorporated into the system, from "the junction of the Southeast Expressway and the (Inner Belt), across downtown Boston, passing as near as practical the west end of the Boston Public Gardens (parallel to Berkeley Street) and then across the Charles River to connections with the Northern Expressway near....Sullivan Square." They made exploratory investigations and came to the conclusion that the average daily traffic which might be diverted from the Northern Expressway and the Central Artery to the suggested Inner Expressway would amount to approximately 100,000 vehicles per day in 1975. Unfortunately, even with the relief that the Inner Expressway could afford, projected volumes on the inner segments of the radial freeways and the Central Artery would still be more than double their capacity.

The same basic concept has been referred to by others (VanNess H. Bates) as the "Back Bay Expressway". The disadvantages of this proposal are that the "Inner Expressway" would:

- detract substantially from the appeal of the Hub as a business, tourist recreational, and residential location;
- not relieve the demand on the Central Artery to the point where its capacity would be adequate in 1975;
- involve extremely high land acquisition and construction costs considering its objectionable side-effects and limited usefulness; and
- be publicly unacceptable and not likely to materialize.

Another proposal, reviewed and rejected, was the "Ocean Highway". This alignment, conceived in the late forties, would serve as an easterly by-pass, connecting Squantum, Moon Island and Long Island with Deer Island and Winthrop by means of a bridge (or a tunnel) across the harbor entrance. It would have ended in East Boston, between Orient Heights and Suffolk Downs. Without even considering the costs which the construction of this highway would involve, it cannot be justified by such relief as it could provide for the Central Artery. Its average traffic potential in 1975, estimated on the basis of the figures in the "Inner Belt Report", would not reach 23,000 vehicles per day. The interchanges with other parts of the highway network are simply too far away from the Hub.

III. Analysis of Highway Systems

In looking for an alternate master highway plan,which would permit a more balanced circulation pattern in the metropolitan region, compatibility with existing facilities and with construction schedules of projects to be started in the immediate future is a categoric necessity. This requirement implies not only that a proposed system must incorporate all freeways, tunnels, etc., which exist or are under construction, but also extensions of Interstate 95 from Route #128 northward, and of the spur emanating from the Central Artery at Southampton Street; furthermore, no new facility should enter into ruinous competition with the toll road and the tunnels.

In recent years research has produced some general guidelines for devising highway networks, which can be usefully applied to the Boston region. A valuable hint is given in the "Urban Transportation - Highway Engineering Handbook" edited in 1960 by K. B. Woods; Mickle and Vorhees state on p. 4-32: " A radial pattern of expressways has certain limitations in that it tends to force traffic to use the downtown loop. A gridiron pattern of expressways, on the other hand, distributes traffic more evenly throughout the system". More explicit is a discussion in Volume 3 of the 1962 Chicago Area Transportation Study. On pp. 36-37 the relative merits and disadvantages of several basic networks are reviewed. A critical remark concerning the Ring and Radial Pattern seems to be formulated with Boston's problems in mind: "..... The radial system does provide roadways aimed at the center of town where it will be desirable and even necessary to encourage transit usage. Feeding cars to the center can build up heavy parking and street capacity problems and so work to inhibit a densely developed CBD." Neither does the study endorse the grid system without qualifications, and concludes for Chicago: "Making a compromise between (the radial system and a grid network of expressways) would require ingenious design, but represents the direction that seems most likely to meet traffic needs and, from a network viewpoint, sensible design."

"Heavy street capacity problems" cannot be avoided at the center of a highway system which is as strongly centripetal as the one which is assumed to develop in the Boston region. Diagram 1, presenting its structure schematically, makes it clear that through-traffic and vehicles going to the Hub, will be forced to compete with each other for the use of the freeways. The accumulation of both types of trips accounts for the serious inadequacy predicted in the Reports. Diagram 2 shows an alternate system. Through-traffic will stay in this case on interstate highways, which by-pass the Hub to the East and to the West, while the traffic to downtown will turn onto spur-roads, which serve the Hub very much like R.R. spur-tracks are serving industrial plants. Diagram 3 illustrates a transitional stage in the development of the alternate system. It demonstrates that traffic congestion will be relieved to a considerable extent as soon as one of the by-passes has been built, and that the alternate system can be developed in stages which will be functionally satisfactory in their own right.

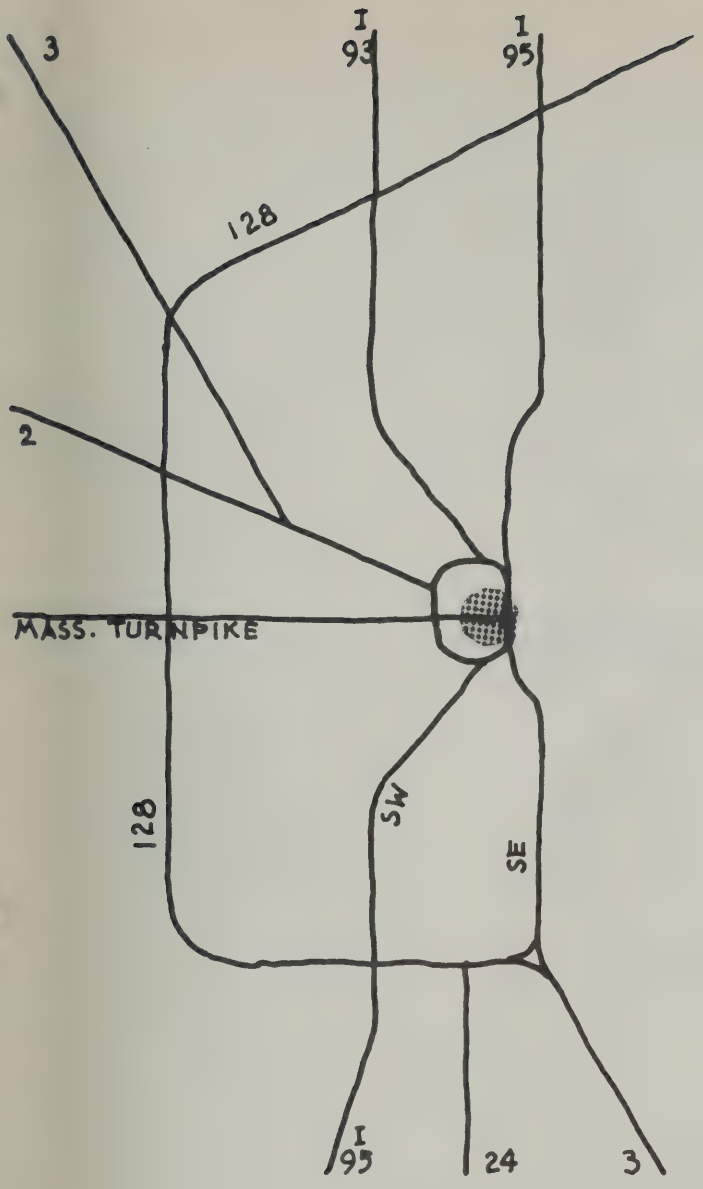


Diagram No. 1
PLANNED SYSTEM

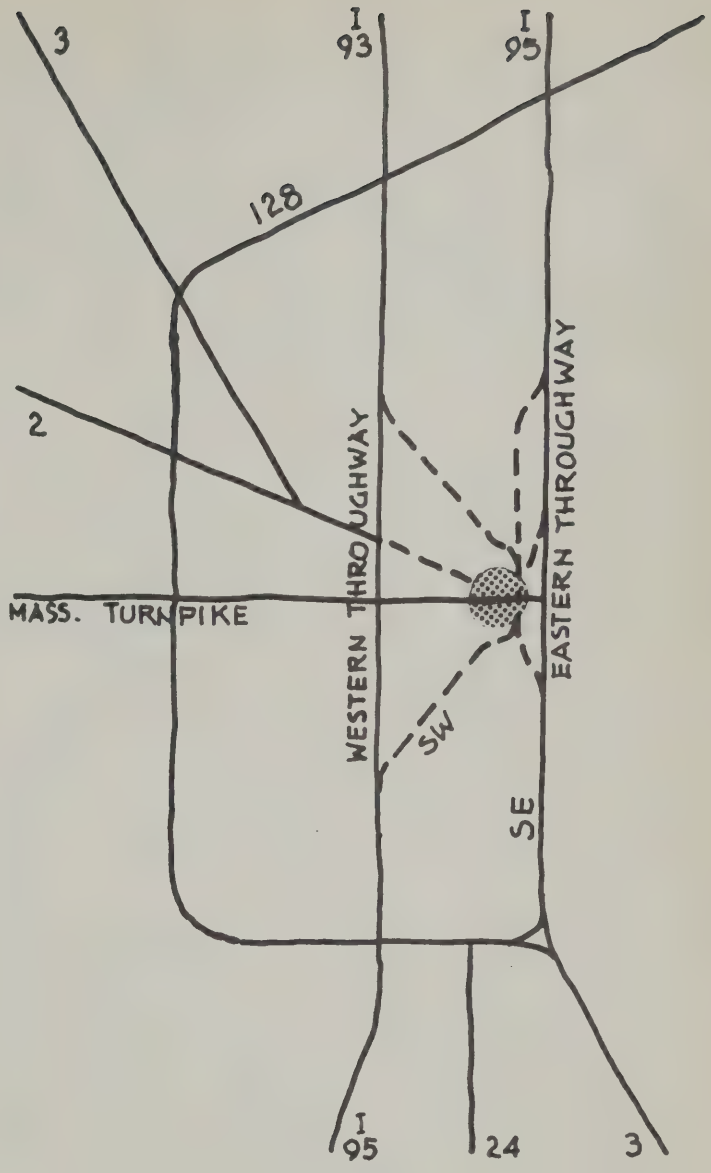


Diagram No. 2
ALTERNATE SYSTEM

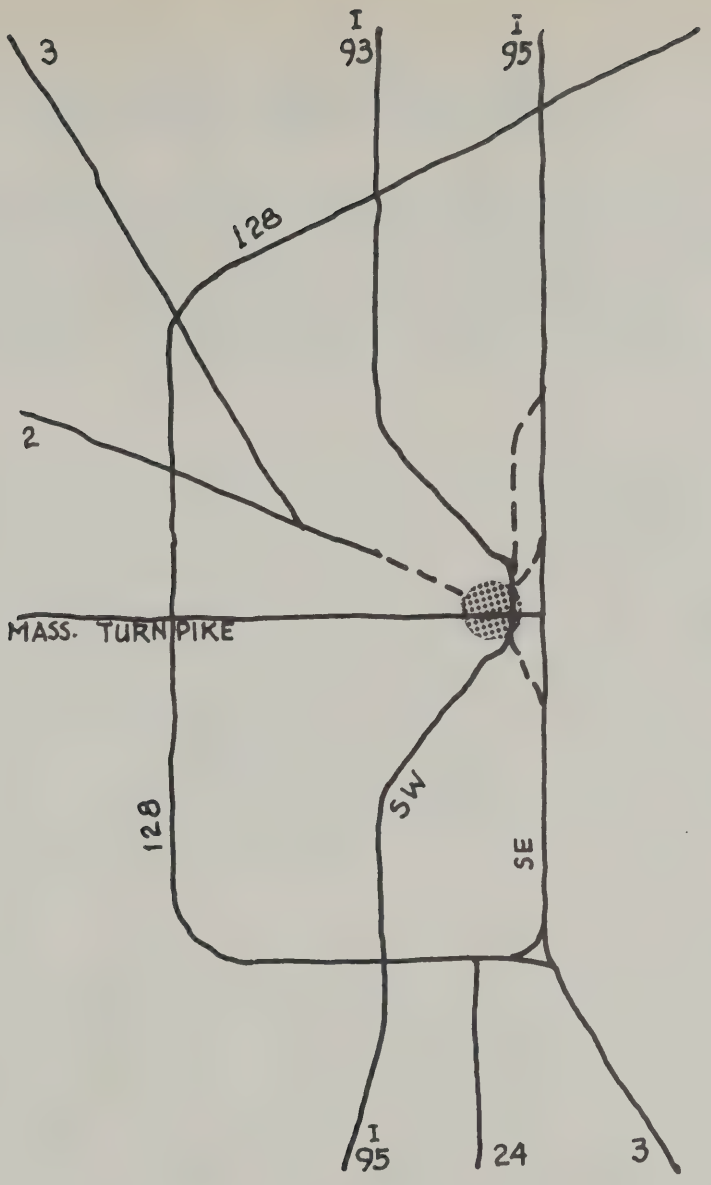


Diagram No. 3

TRANSITIONAL SYSTEM

IV. The Alternate Master Highway Plan

An alternate master highway plan has been devised which could conceivably operate as an effective highway network and appears to have substantial merit. As shown on the attached maps, this alternative would involve the construction of a western throughway and an eastern throughway which includes a tunnel.

The eastern throughway would connect at its northern end with the proposed extension of Interstate 95 to Logan Airport; at its central part with the Mass. Turnpike Extension; and at its southern end with the Southeast Expressway at its crossing with Columbia Road. This eastern throughway would necessitate the construction of a new vehicular tunnel from Fort Point Channel to East Boston. The western throughway, meanwhile would connect at its northern end with Interstate 93 about a mile and a quarter north of Medford Center, and at its southern end with the Southwest Expressway close to the Healy Playground in Roslindale.

Construction of the Inner Belt appears to be imminent; yet implementation of this alternate plan would seem to have rendered unnecessary the construction of the Inner Belt from Tremont Street westward. There would no longer have been any need to tamper with the Back Bay Fens, which is one of the most objectionable features of the Inner Belt both from the viewpoint of institutional dislocation and æsthetics. Costly and unattractive crossings under or over the B.U. Campus and the Charles River would also have been avoided, and the new interstate highway would have followed the city boundary between Cambridge and Arlington through the Alewife Brook Valley, instead of piercing through the heart of Cambridge, cutting the community into halves. Proof of these contentions will be of interest even after construction of the Inner Belt for the further development of the highway network.

The number of dwelling units which would have to be eliminated from the right-of-way in Cambridge would be reduced from over 1,000 units for the Inner Belt to about 350 units for the corresponding piece of the proposed western throughway. (The total number of dwelling units in the right-of-way

of the western throughway is estimated at 883).

V. Tie-ins with Eastern Throughway

The construction of the new tunnel would undoubtedly benefit the Mass.Turnpike Extension, since the tunnel would multiply the users of the Downtown Section of the Turnpike. New traffic would be attracted from the West as well as the East and would change the character of the Turnpike Extension from that of a terminal ramp to that of its busiest segment. The portion east of Prudential would be heavily used as tunnel entrance and exit.

With the Southeast Expressway leading directly to the new tunnel, Morrissey Boulevard would gain in importance as an approach to the Hub. At present many commuters undoubtedly avoid this thoroughfare because it ends at Columbia Avenue. Continuation through Old Colony Avenue and Dorchester Avenue is discouraging. Construction of the easterly throughway could permit traffic to flow without interruption from Morrissey Boulevard to the Central Artery while users of the Southeast Expressway would have to use a ramp if they wished to continue on the Central Artery. The right-of-way between Fort Point Channel and Columbia Road would be located almost entirely on land presently in railroad or industrial use.

It should be remembered, that the whole tunnel idea is predicated on the extension of Interstate 95 from the north to East Boston. North of the harbor, the short connector from the Airport entrance to the existing Callahan and Sumner tunnels, would function as "spur" from Interstate 95 to East Boston and (through the tunnels) to the North End, West End, Massachusetts General Hospital, Beacon Hill, State House, CBD, Financial District, and Government Center.

VI. Traffic Volumes in the Tunnel

While the traffic volume which would pass through the tunnel cannot be estimated without a detailed, special study, the diagrammatic map and calcu-

lation of potential traffic volume on the following page convey an idea of its order of magnitude. Within the framework of the "Inner Belt Report" from which the figures are derived, the estimate is conservative. It includes only trips which would be shortest in time and in distance if routed through the tunnel, and for which no alternative without payment of toll is available. Only 11,000 of the 42,000 vehicle trips between the cross-hatched and dotted areas have been added. How many of the potential 75,000 vehicles in 1975 would actually choose this route on an average day may depend on how the toll compares with the toll charged on the Mystic River Bridge. Whatever figure this is, it constitutes the lower limit for pessimistic assumptions.

VII. Tunnel Financing and Operation

The new tunnel would be operated as a toll facility, to prevent ruinous competition with existing tunnels, and the continuation of the tunnel and Mass. Turnpike Extension into one system would seem to be logical in view of the mutual advantages suggested above.

The scope of the present study included neither estimates of induced traffic and construction costs, nor a cost-benefit analysis. However, it would be careless to assume lightly that the tunnel could be financed entirely through pledging its revenues, at 25¢ per passenger car. Should a grant as high as a third, or more, of the construction costs become necessary, the proposition would still in no way lose justification, because the subsidy can be balanced against the cost of any other relief road.

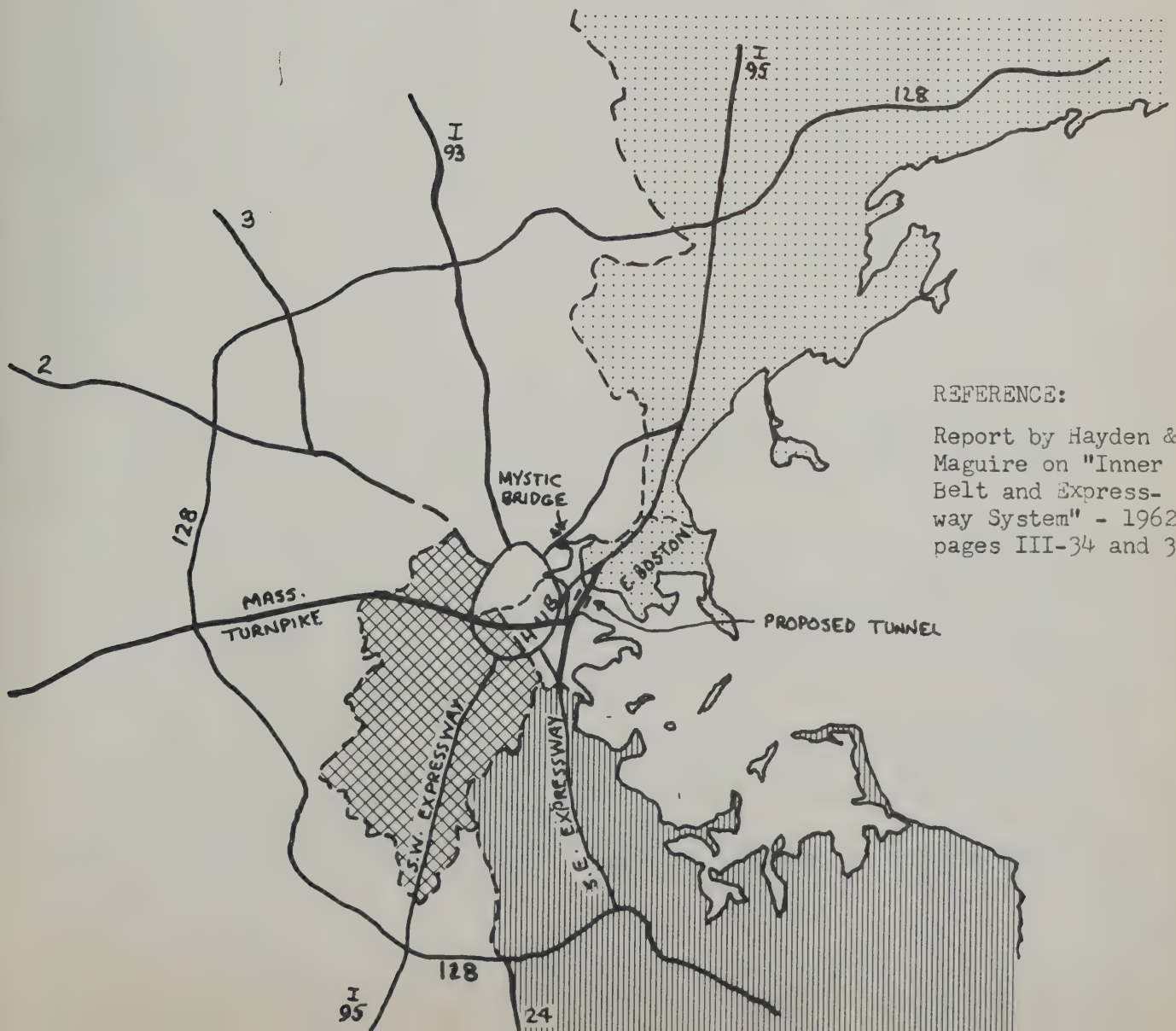
VIII. Design Features of Western Throughway

The alignments shown for the western throughway have been selected to minimize disruption to the adjacent neighborhoods, as long as the freeway is properly designed. Wherever the road traverses built-up areas it should preferably be located below natural grade in an open cut; its total width should be kept to a minimum through the use of retaining walls or supporting columns instead of natural slopes or fills. Frontage roads at grade should only

POTENTIAL TRAFFIC VOLUME FOR NEW TUNNEL UNDER HARBOR

PROJECTED AVERAGE DAILY TRAFFIC 1975

between dotted area or points beyond, and vertical-lined area or points beyond	32,000 vehicle trips
33 1/3% of total volume between Hub and dotted area or points beyond, entering new tunnel via Massachusetts Turnpike	32,000
other traffic entering tunnel via Massachusetts Turnpike	11,000
Total	75,000
trips counted above with origin or destination in East Boston or points adjacent thereto, which will use Callahan and Sumner Tunnels if no new tunnel is built	15,000
Net gain of trip potential	60,000



REFERENCE:

Report by Hayden & Maguire on "Inner Belt and Expressway System" - 1962, pages III-34 and 35

be provided where they are indispensable for local circulation, particularly near entrances and exits. They should not be considered as part of the standard cross-section of the expressway, and normally not be continuous for the entire distance between exits. In areas with low or medium land values, the right-of-way should do double duty as conduit through which light and air will penetrate into overcrowded districts. Places with high land values should be avoided. Where that is not possible, exploitation of air rights should be promoted. However, considerations for the effect which the freeway will have on the neighborhood have to be balanced by the care with which the views offered to highway users will be designed.

The numbers given for dwelling units which would have to be razed for clearance of right-of-way are very rough estimates, based on data gleaned from various sources; among them the Sanborn Atlas, a map of Brookline prepared by the Town Engineer of Brookline, and air photos with land use annotations prepared by Voigt, Ivers and Associates for the Eastern Massachusetts Regional Planning Project. For calculating the number of demolitions there was assumed a right-of-way uniformly 150 feet wide, except where additional width is needed for ramps. This generalization implies that the four to six lane wide freeway, adjacent to the center of a large metropolitan area, will be kept as narrow as possible. Noteworthy features of the freeway would include:

low lying stretches where drainage would require pumping;

bridges over the Charles River and the Mystic River at spots where the streams are narrow; and a viaduct, 550 feet long, in Roslindale, which would bridge Washington Street and then rise westwards toward the Saddle south of Peters Hill and of the Arboretum;

the stretch located in Brookline, where construction would require a narrow slice of land from the Country Club and some other properties which may be highly valued by their owners; nevertheless, until further investigation, it is reasonable to assume that the price per square foot would not be higher than in less fashionable neighborhoods, because very few demolitions would be necessary in the stretch which is more than two miles long from the VFW Parkway to Route #9;

possibly the southeast segment, although it is not part of the preferred alignment; this segment would have to be designed and constructed with exceptional care, regardless of additional costs, in order to protect the beauty of Jamaica Pond and the Arborway.

While considerations of costs do not seem to be decisive for the alignment

of this freeway, it is obvious that crossing of the Country Club area in Brookline would raise powerful opposition.

IX. Traffic Volumes on Western Throughway

In the absence of any better basis, a very rough estimate of the traffic volumes which could be expected on the western expressway is derived from the "Inner Belt Report," and is shown on the following page. It should be noted, however, that this source does not lend itself readily for use in deducing traffic volumes on the proposed route, and the results must be interpreted with extreme caution.

Two very general conclusions suggest themselves:

On the average, in 1975 the freeway would be used daily by 50,000 to 100,000 vehicles; and

a more easterly location might increase the use from a half to two thirds over a more westerly alignment.

In evaluating benefits and damages which the construction of a freeway may cause in a community - Medford, Somerville, and Cambridge are cases in point - social losses must often be compared with social gains without the help of a common, objective measuring unit. Alignment of the freeway through a densely developed area may demand a high number of demolitions, but it will also increase use and usefulness of the road by making it accessible to more people. On the other hand, while the demand of a populous neighborhood is practically insatiable, it is served already by some facilities while other areas still have none. The choice between first service to the few and multiple service to the many is in the last analysis subjective.

WESTERN LINK OF INTERSTATE SYSTEM

PREFERRED ALIGNMENT

ALTERNATE ALIGNMENT

AVERAGE NUMBER OF VEHICLES PER DAY

ROUGH ESTIMATE FOR 1975

based on a report by Hayden and Maguire on
"Inner Belt and Expressway System - 1962"
pages III-34 and 35

Expressway Segment Located In	Preferred Alignment	Alternate Alignment
Medford	33,000 veh/day	---
Somerville	---	57,000 veh/day
Cambridge	62,000 veh/day	103,000 veh/day
Brighton	57,000 veh/day	94,000 veh/day
Brookline	61,000 veh/day	97,000 veh/day
W. Roxbury - Roslindale	57,000 veh/day	81,000 veh/day

DIAGRAM NO. 4
NUMBER OF DWELLING UNITS LOCATED IN RIGHT-OF-WAY OF ALTERNATE ALIGNMENTS

preferred alignment (—•—):
883 D.U's to be cleared

inner alignment:
1010 D.U.'s to be cleared

outer alignment:
609 D.U.'s to be cleared

X. Selection of Preferred Alignment

The selection of the preferred alignment is motivated by the following considerations:

1. It is very important to establish the smoothest possible connection between the proposed Interstate Link and Storrow Drive. The area at the western end of Eliot Bridge is the site where the interchange can be built most conveniently, although a new street, now under construction on the north bank of the Charles River, may complicate matters slightly; no plans of that street were yet available for this study.

The preferred alignment requires that at least 865 D.U.'s would have to be demolished for clearance in the total right-of-way, while the minimum number of such demolitions for all investigated alignments amount to 609 only, which is 256, or 30% less. (See Diagram No. 4)

2. In addition to the advantageous tie with Storrow Drive, the sacrifice of these D.U.'s also permits the expressway to cross Brighton near its center, where it will be the most useful. The preferred alignment will have exit and entrance ramps which are close to employment centers as well as to residential areas, while the alternate would be located rather eccentrically.

3. The choice between the inner and outer alignment north of the connection with Storrow Drive, was decided in favor of the outer one because the existing Interstate 93 and its initiated extention to Charlestown and the Central Artery are serving the easterly sections of Medford and Somerville adequately, while Arlington, Belmont, and Watertown are in great need of better north-south circulation channels; and because

4. The preferred alignment for the road segment would require the demolition of 350 D.U.'s, vs 495 for the alternate location, reducing the number of sacrificed units in this stretch alone by 145 (41%).

5. Furthermore, the preferred alignment will require three lanes in each direction in and south of Cambridge; two lanes in each direction will be sufficient in Medford, which will permit a smoother merging of the new expressway with Interstate 93. The alternate location would require that three new lanes merge with four existing ones which would create quite an awkward problem.

6. For the southern segment of the Interstate link the more westerly alignment is preferred because the easterly one would damage one of the most scenic public areas within Boston, the area of Jamaica Pond - Arborway - Arnold Arboretum. As mentioned previously the preferred location would require a narrow slice of land from the Country Club, and while it would do less aesthetic damage, it might arouse as much or more opposition. Nominally, the preferred alignment for the southern segment requires the razing of 338 D.U.'s vs 320 in the way of the alternate. This difference of 18 (5%) falls within the margin of error of this rough estimate and can be disregarded.

XI. Evaluation of Proposed Alternate

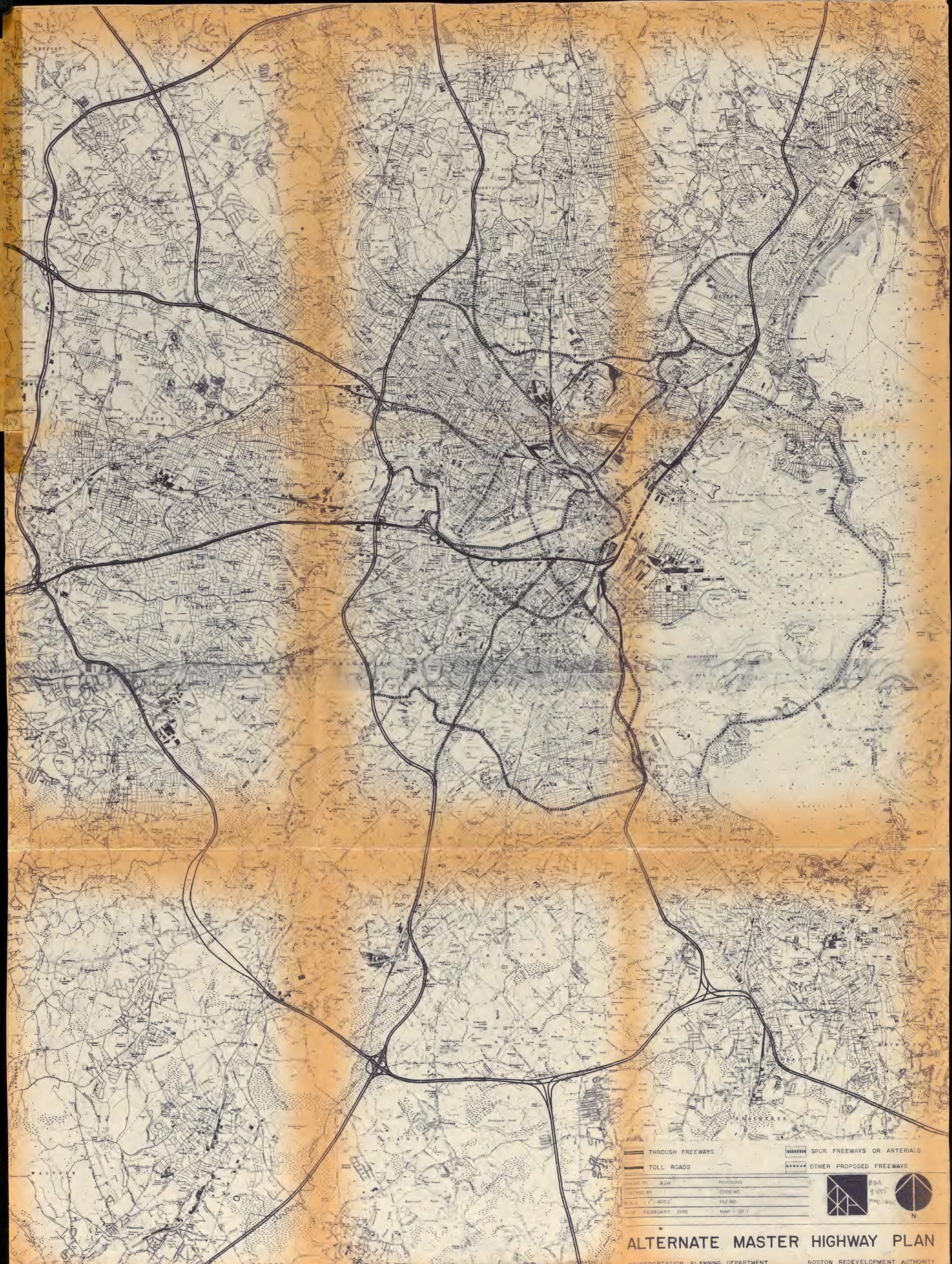
There seems to be no doubt that the proposed Alternate Master Highway Plan would be technically superior to the system of freeways now assumed for development in the Boston region. Its advantages, some of which have already been mentioned, include greater economy, substantially less residential and institutional dislocation, less congestion and increased travel speed due to rational separation of through from local traffic, and increased use of the Mass. Turnpike Extension. The additional functional advantage of the alternate plan is that the throughways east and west of the Hub, would really reduce the demand on the Central Artery to a volume it can handle while the Inner Belt would still leave it with a demand for twice its traffic capacity. The eastern by-pass through the tunnel alone may prove to be more efficient than the Inner Belt. Detailed analysis to show the advantages and disadvantages of this alternate plan over lay-outs based on different principles has

not yet been possible. Therefore, it is recommended that the EMRPP adopt this proposed plan as a study alternate and compare it with the current highway master plan at the earliest possible date.

XII. Timetable for Construction

It is recognized that the hour for changing plans has passed. Engineering drawings for the Inner Belt and the Southwest Expressway are virtually ready and construction should be started very soon. The function of the portion of the Southwest Expressway from Roslindale to Downtown differs depending on which system is chosen; but that does not necessarily affect its design. The Inner Belt, however, is eliminated in the alternate plan, except for the short connection between the Southwest Expressway and the Central Artery, which - as a matter of fact - would be transformed into a segment of the Southwest itself. It happens that the BRA has stressed constantly that the Inner Belt must be built before the Southwest Expressway in order to mitigate the overloading of the Central Artery. In the alternate plan, the new tunnel under the harbor would assume the analagous function. The logical conclusion is that opening of the Southwest Expressway would not be desirable until the new tunnel has been put into operation.

The need for an additional tunnel has been widely recognized. There is now before the Legislature, House Bill No. 968, which, if enacted, would order an engineering and economic study to decide the feasibility of building such a tunnel. Support for this bill should accompany the analysis by the EMRPP of the alternate system.


BEDFORD
BURLINGTON
LEXINGTON
BELMONT
WALTHAM
WATERTOWN
NEWTON
WELLESLEY
DOVER
WALPOLE
SHARON
STONEHAM
MELROSE
WAKEFIELD
READING
MALDEN
EVERETT
MEDFORD
SOMERVILLE
CAMBRIDGE
BROOKLINE
BOSTON
MILTON
CANTON
SAUGUS
LYNN
SALEM
NAHANT
LOGAN INTERNATIONAL AIRPORT
BROAD SOUND
BOSTON HARBOR
DORCHESTER BAY
QUINCY BAY
BRAINTREE
WEYMOUTH
THROUGH FREEWAYS
TOLL ROADS
SPUR FREEWAYS OR ARTERIALS
OTHER PROPOSED FREEWAYS
DRAWN BY AJH
CHECKED BY
SCALE 1" = 4000'
FEBRUARY 1966
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FILE NO.
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ALTERNATE MASTER HIGHWAY PLAN
TRANSPORTATION PLANNING DEPARTMENT
BOSTON REDEVELOPMENT AUTHORITY

PREFERRED ALIGNMENT
ALTERNATE ALIGNMENT
SPUR FREEWAY OR ARTERIAL
ALTERNATE SPUR FREEWAY OR ARTERIAL
AFFECTED LOCAL STREETS
DRAWN BY AJH
CHECKED BY
SCALE 1" = 400'
DATE JANUARY 1966
REVISIONS
CODE NO.
FILE NO.
MAP 1 OF 1
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STUDY OF
TUNNEL FOR
EASTERN THROUGHWAY
ALIGNMENT
BOSTON REDEVELOPMENT AUTHORITY

PKWY
BM 28
CITY BDY
GROVE
Oak Grove
34
Cemetery
Gleason Sch
BM 26
Playstead Park
West Medford
HIGH ST
WINTHROP
BM 59
Jr High Sch
CITY VALLEY PKWY BDY
MYSTIC RIVER
BOSTON
20
Thomson Sch
Dilboy Field
Jr High Sch
Crosby Sch
St Pauls Cem
East Arlington
MAIN
BROADWAY
Medford Hillside
Cutler Sch
BM 34
TUFTS COLLEGE
Powder House Square
CLARENDON AVE
Jr High Sch
West Somerville
COLLEGE AVE
Ball Square
Brown Sch
North Cambridge
Davis Square
Cutler Square
Fitzgerald Sch
Jerry's Pond
RIDGE
Cem
BM 8
Drive-in Theater
ALEWIFE
Clay Pit
Radio Sta (WTAO)
WALDEN
Porter Square
Clay Ground
Wilson Square
Carr Sch
Playground
Davis Hill
City Hospital
Park
Lincoln Sch
HARVARD
Tufts Park
Columbus Sch
Park
Hedley Sch
Magoun Square
Trum Field
Winter Hill
BROADWAY
Playground
BM 41
Dame Sch
Hancock Sch
MYSTIC RIVER
RES
Lawrence Memorial Hospital
St Francis Sch
2 LANE
MEDFORD
McNally Playground
Roberts Jr H S
High Sch
Medford Square
BM
Cem
Swan Sch
Logan Park
CENTRAL
Franklin Sch
Fulton Sch
Playground
Wrights Pd
137
Bellevue Pond
Lookout
93
Wait Sch
Winthrop Square
Lawrence
Cem
Hosp
Bdy
Approx
Ave
St
Rd
Pkwy
Bdy
Sq
Cem
Sch
Jr
Hosp
Ave
Rd
St

Fresh Pond
Municipal Golf Course
City Home
Clay Pit
Radio Sta (WTKO)
Kingsley Park
Belmont Cem
Park
Park
Harvard Observatory
CAMBRIDGE
Rindge Sch
Agassiz Sch
Porter Square
Play Ground
Play Ground
Common
RADCLIFFE COLLEGE
HARVARD UNIVERSITY
Holy
Coolidge Corner Sch
Mt Auburn Cemetery
Mt Auburn Tower
136
East Watertown
Cambridge Cemetery
MIDDLESEX CO
SUFFOLK CO
Eliot Bridge
Anderson Bridge
Harvard Stadium
HARVARD UNIVERSITY
Putnam Playground
Hought Sch
Filippello Playground
Sawins Pond
Radio Tower (WBZ)
Smith Playground
Hoyt Field
Armory
North Brighton
Playground
Gardner Sch
Barrett Sch
Allston
Morse Sch
CHARLES
McKinney Playground
St Columbkill Sch
Mt St Joseph Academy
Union Square
Boston U Field
Ringer Playground
Brighton
High Sch
St Elizabeth's Hospital
St Gabriel's Monastery
Courthouse
Roger Park
Edison Sch
St Johns Seminary
Aberdeen
Homeopathic Hospital
Brooks Hospital
Dexter Sch
Winthrop Sq
St Aidans Sch
Play Ground
Devotion Sch
Amory Playground
Coolidge Corner
Longwood
Lawrence
Evergreen Cemetery
Hill
Reservoir
127
Reservoir
Runkle Sch
Washington Square
Griggs Field
Aspinwall Hill
Play Ground
Brookline Hill
Fisher Hill
PREFERRED ALIGNMENT
ALTERNATE ALIGNMENT
MASS. TURNPIKE EXTENSION
AFFECTED LOCAL STREETS
N
STUDY OF
WESTERN THROUGHWAY
ALIGNMENT
(CENTRAL SEGMENT)
BOSTON REDEVELOPMENT AUTHORITY

PREFERRED ALIGNMENT

ALTERNATE ALIGNMENT

AFFECTED LOCAL STREETS

DRAWN BY A.J.H.	REVISIONS
CHECKED BY	CODE NO.
SCALE 1" = 400'	FILE NO.
DATE SEPT. 1965	MAP 3 OF 3

BRA 3695 MAP 3of3

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STUDY OF WESTERN THROUGHWAY ALIGNMENT (SOUTHERN SEGMENT)

BOSTON REDEVELOPMENT AUTHORITY

T35 BRA\
Boston Redevelopment
Authority.
Report on the Alternate Master Highway Plan for Boston.